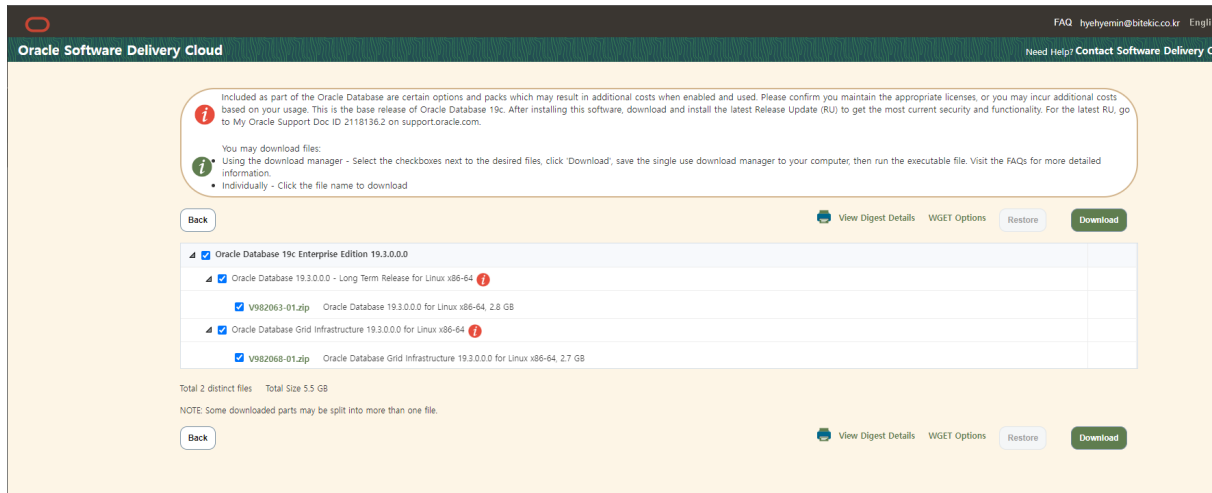


VI. (Silent)Grid Infrastructure Standalone + applyRU



1. Grid 압축 파일 업로드 및 압축 해제

1. Grid 압축 파일 업로드 및 설치 과정에 필요한 파일들 업로드

```
[root@SON ~]# cd /media
[root@SON media]# ll
합계 9272112
-rw-r--r-- 1 root root 3059705302 6월 20 22:49 V982063-01.zip
-rw-r--r-- 1 root root 2889184573 6월 20 22:50 V982068-01.zip
-rw-r--r-- 1 root root 19112 6월 21 13:01 compat-libcap1-1.10-7.el7.x86_64.rpm
-rw-r--r-- 1 root root 195388 6월 21 13:01 compat-libstdc++-33-3.2.3-72.el7.x86_64.rpm
-rw-r--r-- 1 root root 41882 6월 20 21:43 kmod-redhat-oracleasm-2.0.8-18.0.1.el8.src.rpm
-rw-r--r-- 1 root root 99852 6월 20 21:43 oracleasm-support-2.1.12-1.el8.x86_64.rpm
-rw-r--r-- 1 root root 27092 6월 20 21:43 oracleasm-lib-2.0.17-1.el8.x86_64.rpm
-rw-r--r-- 1 root root 3411816300 6월 21 13:03 p36233126_190000_Linux-x86-64.zip
-rw-r--r-- 1 root root 133535622 6월 20 22:36 p6880880_190000_Linux-x86-64.zip
```

```

[root@SON ~]# cd /media
[root@SON media]# ll
합 계 9272112
-rw-r--r-- 1 root root 3059705302 6월 20 22:49 V982063-01.zip
-rw-r--r-- 1 root root 2889184573 6월 20 22:50 V982068-01.zip
-rw-r--r-- 1 root root 19112 6월 21 13:01 compat-libcap1-1.10-7.el7.x86_64.rpm
-rw-r--r-- 1 root root 195388 6월 21 13:01 compat-libstdc++-33-3.2.3-72.el7.x86_64.rpm
-rw-r--r-- 1 root root 41882 6월 20 21:43 kmod-redhat-oracleasm-2.0.8-18.0.1.el8.src.rpm
-rw-r--r-- 1 root root 99852 6월 20 21:43 oracleasm-support-2.1.12-1.el8.x86_64.rpm
-rw-r--r-- 1 root root 27092 6월 20 21:43 oracleasm-lib-2.0.17-1.el8.x86_64.rpm
-rw-r--r-- 1 root root 3411816300 6월 21 13:03 p36233126_190000_Linux-x86-64.zip
-rw-r--r-- 1 root root 133535622 6월 20 22:36 p6880880_190000_Linux-x86-64.zip

```

2. grid 유저로 접속하여 GRID_HOME에 GRID 설치 파일 압축 해제

소유권자 문제로 인해 grid 유저에서 unzip해야합니다.

unzip -d 옵션을 사용해서 GRID_HOME 에 unzip 합니다.

```

# grid 유저로 접속
su - grid

# -d 옵션을 사용하여 grid_home에 압축 해제
unzip /media/V982068-01.zip -d $ORACLE_HOME

```

- -d : 다른 디렉토리에 압축해제 가능

3. GI 패치 파일 압축 해제

```

# 패치 파일을 압축 해제할 디렉토리 생성
mkdir /media/unzipped_patch

# 패치 파일 압축 해제(grid 유저로 압축 해제)
$ unzip /media/p36233126_190000_Linux-x86-64.zip -d /media/unzipped_patch

# 권한 확인 후 755로 변경(이미 755라서 놔둠)
chmod -R 755 /unzipped_patch

```

```

[root@SON ~]# chmod -R 755 /media/unzipped_patch
[root@SON ~]#
[root@SON ~]# cd /media/unzipped_patch/
[root@SON unzipped_patch]#
[root@SON unzipped_patch]# ls
36233126 PatchSearch.xml
[root@SON unzipped_patch]# ll
합 계 2344
drwxr-xr-x 8 grid dba 159 4월 12 10:03 36233126
-rwxr-xr-x 1 grid dba 2399279 4월 16 22:57 PatchSearch.xml

```

2. Opatch 버전 확인 및 최신 버전으로 업데이트

- 전제 조건 : 19.23.0.0 으로 patch 하기 위해서는 Opatch 버전이 12.2.0.1.41 이상이어야 한다.

You must use the OPatch utility version **12.2.0.1.41 or later to apply this patch**

💡 아래 작업은 추후 grid 유저와 oracle 유저 각각에서 모두 수행

- 패치가 적용되는 모든 Oracle RAC 데이터베이스 홈과 Grid 홈에서 새 OPatch 유틸리티를 업데이트해야 합니다

1. OPatch 버전 확인

```
[+ASM:~]$ $ORACLE_HOME/OPatch/patch version
OPatch Version: 12.2.0.1.17

OPatch succeeded.
```

```
[+ASM@grid:~]$ $ORACLE_HOME/OPatch/patch version
OPatch Version: 12.2.0.1.17

OPatch succeeded.
```

```
[+ASM@grid:~]$ opatch version
OPatch Version: 12.2.0.1.17

OPatch succeeded.
```

3. OPatch 최신 파일 업로드 후 백업 및 압축 파일 해제

Patch 6880880

Simple Search Advanced Search Quick Links Saved Searches

Description	OPatch 12.2.0.1.42 for DB 19.0.0.0.0 (Apr 2024)
Product	Oracle Global Lifecycle Management OPatch
Select a Release	OPatch 19.0.0.0.0
Platform or Language ⓘ	Linux x86
Last Updated	15-APR-2024
Size	125M (131308977 bytes)
Entitlement Class ⓘ	Software
Classification ⓘ	General

Download View Readme View Digest

Patchsets known to include or supersede Patch 6880880 ⓘ

No information available from the patch repository

Download Notes

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```
# OPatch 최신 파일 확인
ls /media
```

```
# 기존 OPatch 파일 백업
## mv OPatch OPatch_날짜
mv OPatch OPatch_240621

# -d 옵션을 사용하여 GRID_HOME에 OPatch 압축 파일 해제
unzip /media/p6880880_190000_Linux-x86-64 -d $ORACLE_HOME

# opatch 버전 확인
opatch version
```

-- 결과

```
[+ASM@grid:/u01/app/grid/product/grid]$ ls

[+ASM@grid:/media]$ cd $ORACLE_HOME

[+ASM@grid:/u01/app/grid/product/grid]$ mv OPatch OPatch_240621

[+ASM@grid:/u01/app/grid/product/grid]$ ls

[+ASM@grid:/u01/app/grid/product/grid]$ unzip /media/p6880880_190000_Linux-x86-64.zip -d $ORACLE_HOME

[+ASM@grid:/u01/app/grid/product/grid]$ opatch version
OPatch Version: 12.2.0.1.42

OPatch succeeded.
```

```
[+ASM@grid:~]$ cd /media
[+ASM@grid:/media]$
[+ASM@grid:/media]$ ll
total 9272112
-rw-r--r-- 1 root root 3059705302 Jun 20 22:49 V982063-01.zip
-rw-r--r-- 1 root root 2889184573 Jun 20 22:50 V982068-01.zip
-rw-r--r-- 1 root root 19112 Jun 21 13:01 compat-libcap1-1.10-7.el7.x86_64.rpm
-rw-r--r-- 1 root root 195388 Jun 21 13:01 compat-libstdc++-33-3.2.3-72.el7.x86_64.rpm
-rw-r--r-- 1 root root 41882 Jun 20 21:43 kmod-redhat-oracleasm-2.0.8-18.0.1.el8.src.rpm
-rw-r--r-- 1 root root 99852 Jun 20 21:43 oracleasm-support-2.1.12-1.el8.x86_64.rpm
-rw-r--r-- 1 root root 27092 Jun 20 21:43 oracleasm-lib-2.0.17-1.el8.x86_64.rpm
-rw-r--r-- 1 root root 3411816300 Jun 21 13:03 p36233126_190000_Linux-x86-64.zip
-rw-r--r-- 1 root root 133535622 Jun 20 22:36 p6880880_190000_Linux-x86-64.zip
```

```
[+ASM@grid:~]$ cd /media
[+ASM@grid:/media]$
[+ASM@grid:/media]$ ll
total 927212
-rw-r--r-- 1 root root 3859705302 Jun 20 22:49 V982063-01.zip
-rw-r--r-- 1 root root 2889184573 Jun 20 22:50 V982068-01.zip
-rw-r--r-- 1 root root 19112 Jun 21 13:01 compat-libcap1-1.10-7.el7.x86_64.rpm
-rw-r--r-- 1 root root 195388 Jun 21 13:01 compat-libstdc++-33-3.2.3-72.el7.x86_64.rpm
-rw-r--r-- 1 root root 41882 Jun 20 21:43 kmod-redhat-oracleasm-2.0.0-18.0.1.el8.src.rpm
-rw-r--r-- 1 root root 99852 Jun 20 21:43 oracleasm-support-2.1.12-1.el8.x86_64.rpm
-rw-r--r-- 1 root root 27092 Jun 20 21:43 oracleasm-lib-2.0.17-1.el8.x86_64.rpm
-rw-r--r-- 1 root root 3411816300 Jun 21 13:03 p36233126_190000_Linux-x86-64.zip
-rw-r--r-- 1 root root 133535622 Jun 20 22:36 p6880880_190000_Linux-x86-64.zip
[+ASM@grid:/media]$
[+ASM@grid:/media]$ cd $ORACLE_HOME
[+ASM@grid:/u01/app/grid/product/grid]$
[+ASM@grid:/u01/app/grid/product/grid]$ ls
OPatch      cha      dbjava    dmu      has      javavm    lib      oracle    owm      racg      root.sh.old  slax      tomcat      wlm
OPatch      clone    dbs        env.ora  hs        jdbc      md        ord        perl     rdbms     root.sh.old.1  slax      ucp        wlg
addnode     crs      deinstall  evm      install   jdbc      network  ords       plsql    relnotes  rootupgrade.sh  sqlpatch  usm        xag
assistants  css      demo       gnpnp    instantclient  jlib      nls      oss        precomp  rhp        rootupgrade.sh  sqlplus  utl        xdk
bin         cv       diagnostics gridSetup.sh  inventory ldap      opmn      out        qos      root.sh   sdk        suptools      welcome.html
[+ASM@grid:/u01/app/grid/product/grid]$
[+ASM@grid:/u01/app/grid/product/grid]$ mv OPatch OPatch_240621
[+ASM@grid:/u01/app/grid/product/grid]$
[+ASM@grid:/u01/app/grid/product/grid]$ ls
OPatch_240621 clone    deinstall  gnpnp    inventory lib      ord    plsql    rhp      sdk      tomcat      wwg
OPatch      crs      demo       gridSetup.sh  javavm    md      ords    precomp  root.sh  slax      ucp        xag
addnode     css      diagnostics has        jdbc      network oss     qos      root.sh.old  sqlpatch  usm        xdk
assistants  cv       dmu        hs        jdk       nls     oui     racg     root.sh.old.1  sqlplus  utl
bin         dbjava   env.ora    install   jlib      opmn    owm     rdbms    rootupgrade.sh  srvrn    welcome.html
cha         dbs      evm        instantclient  ldap      oracle  perl    relnotes  runcluvfy.sh  suptools  wlm
[+ASM@grid:/u01/app/grid/product/grid]$
[+ASM@grid:/u01/app/grid/product/grid]$ unzip /media/p6880880_190000_Linux-x86-64.zip -d $ORACLE_HOME
Archive: /media/p6880880_190000_Linux-x86-64.zip
  creating: /u01/app/grid/product/grid/OPatch/
  inflating: /u01/app/grid/product/grid/OPatch/opatchauto
  creating: /u01/app/grid/product/grid/OPatch/ocm/
[+ASM@grid:/u01/app/grid/product/grid]$ ls
OPatch      cha      dbs        evm      instantclient  ldap      oracle    perl     relnotes      runcluvfy.sh  suptools      wlm
OPatch_240621 clone    deinstall  gnpnp    inventory      lib      ord      plsql    rhp      sdk      tomcat      wwg
OPatch      crs      demo       gridSetup.sh  javavm        md      ords    precomp  root.sh  slax      ucp        xag
addnode     css      diagnostics has        jdbc      network  oss     qos      root.sh.old  sqlpatch  usm        xdk
assistants  cv       dmu        hs        jdk          nls     oui     racg     root.sh.old.1  sqlplus  utl
bin         dbjava   env.ora    install   jlib         opmn    owm     rdbms    rootupgrade.sh  srvrn    welcome.html
cha         dbs      evm        instantclient  ldap      oracle  perl    relnotes  runcluvfy.sh  suptools  wlm
[+ASM@grid:/u01/app/grid/product/grid]$
[+ASM@grid:/u01/app/grid/product/grid]$ opatch version
OPatch Version: 12.2.0.1.42
OPatch succeeded.
[+ASM@grid:/u01/app/grid/product/grid]$
```

3. cvuqdisk 패키지 설치 (root 계정으로 수행)

cvuqdisk 패키지는 Oracle Cluster Verification Utility (CVU)에서 사용되는 중요한 구성 요소입니다.

- **CVUQDISK_GRP** 환경 변수 설정 및 **cvuqdisk** 패키지 설치(root유저에서 수행)

```
## GRID_HOME/cv/rpm으로 이동
cd /u01/app/grid/product/grid/cv/rpm

## CVUQDISK_GRP 환경 변수를 사용하여 dba 그룹 지정
export CVUQDISK_GRP=dba

## cvuqdisk 패키지 설치
dnf install -y cvuqdisk-1.0.10-1.rpm
```

```
[root@SON ~]# cd /u01/app/grid/product/grid/cv/rpm
[root@SON rpm]#
[root@SON rpm]# export CVUQDISK_GRP=dba
[root@SON rpm]#
[root@SON rpm]# dnf install -y cvuqdisk-1.0.10-1.rpm
```

4. Grid Infrastructure 설치를 위한 response file 작성



중요한 주의 사항

- 이 파일에는 일반 텍스트 비밀번호가 포함될 수 있으므로, 오라클 사용자 또는 데이터베이스 관리자가 읽기 권한만 가지도록 보안을 유지해야 합니다.

1. response file 작성

```
su - grid
cd $ORACLE_HOME/install/response

# grid response file을 복사해서 사용
cp gridsetup.rsp grid_install.rsp
vi grid_install.rsp

# 혹은 아래 처럼 바로 response file 생성

vi $ORACLE_HOME/install/response/grid_install.rsp
```

```
[root@SON ~]# su - grid
[+ASM@grid:~]$ cd $ORACLE_HOME/install/response
[+ASM@grid:response]$ ls
gridsetup.rsp  sample.ccf
[+ASM@grid:response]$
[+ASM@grid:response]$ cp gridsetup.rsp grid_install.rsp
[+ASM@grid:response]$
[+ASM@grid:response]$ ls
grid_install.rsp  gridsetup.rsp  sample.ccf
[+ASM@grid:response]$
[+ASM@grid:response]$ vi grid_install.rsp
```

```
[+ASM@grid:~]$ cd $ORACLE_HOME/install/response
[+ASM@grid:response]$ ls
gridsetup.rsp  sample.ccf
[+ASM@grid:response]$
[+ASM@grid:response]$ cp gridsetup.rsp grid_install.rsp
[+ASM@grid:response]$
[+ASM@grid:response]$ ls
grid_install.rsp  gridsetup.rsp  sample.ccf
[+ASM@grid:response]$
[+ASM@grid:response]$ vi grid_install.rsp
```

```

#####
## Copyright(c) Oracle Corporation 1998,2019. All rights reserved.      ##
##                                                                    ##
## Specify values for the variables listed below to customize           ##
## your installation.                                                    ##
##                                                                    ##
## Each variable is associated with a comment. The comment              ##
## can help to populate the variables with the appropriate              ##
## values.                                                                ##
##                                                                    ##
## IMPORTANT NOTE: This file contains plain text passwords and          ##
## should be secured to have read permission only by oracle user        ##
## or db administrator who owns this installation.                      ##
##                                                                    ##
#####

##                                                                    ##
## Instructions to fill this response file                               ##
## To register and configure 'Grid Infrastructure for Cluster'          ##
## - Fill out sections A,B,C,D,E,F and G                                ##
## - Fill out section G if OCR and voting disk should be placed on ASM  ##
##                                                                    ##
## To register and configure 'Grid Infrastructure for Standalone server' ##
## - Fill out sections A,B and G                                         ##
##                                                                    ##
## To register software for 'Grid Infrastructure'                        ##
## - Fill out sections A,B and D                                         ##
## - Provide the cluster nodes in section D when choosing CRS_SWONLY as ##
##   installation option in section A                                    ##
##                                                                    ##
## To upgrade clusterware and/or Automatic storage management of earlier ##
## releases                                                              ##
## - Fill out sections A,B,C,D and H                                     ##
##                                                                    ##
## To add more nodes to the cluster                                     ##
## - Fill out sections A and D                                           ##
## - Provide the cluster nodes in section D when choosing CRS_ADDNODE as ##
##   installation option in section A                                    ##
##                                                                    ##
#####

#-----
# Do not change the following system generated value.
#-----
oracle.install.responseFileVersion=/oracle/install/rspfmt_crsinstall_response_schema_v19.0.0

#####
#

```

▼ 설치 시나리오별 필요한 섹션

- **Grid Infrastructure for Cluster 등록 및 구성:** 섹션 A, B, C, D, E, F 및 G를 채웁니다. OCR 및 VOTE 디스크를 ASM에 배치하려면 섹션 G도 채웁니다.
- **Grid Infrastructure for Standalone 서버 등록 및 구성:** 섹션 A, B 및 G를 채웁니다.
- **Grid Infrastructure 소프트웨어 등록:** 섹션 A, B 및 D를 채웁니다. 설치 옵션으로 **CRS_SWONLY**를 선택한 경우 섹션 D에 클러스터 노드를 제공합니다.
- **이전 버전의 클러스터웨어 및 ASM 업그레이드:** 섹션 A, B, C, D 및 H를 채웁니다.
- **클러스터에 노드 추가:** 섹션 A 및 D를 채웁니다. 설치 옵션으로 **CRS_ADDNODE**를 선택한 경우 섹션 D에 클러스터 노드를 제공합니다.

2. response file 내용 요약

```

# 섹션 A : Oracle GI 설치 시 기본 설정 정의
INVENTORY_LOCATION=/u01/app/oraInventory
oracle.install.option=HA_CONFIG
ORACLE_BASE=/u01/app/grid

# 섹션 B : Oracle GI 설치 시 필요한 사용자 그룹을 설정

```

```

oracle.install.asm.OSDBA=dba
oracle.install.asm.OSOPER=dba
oracle.install.asm.OSASM=dba

# 섹션 G : ASM 및 디스크 그룹 설정
oracle.install.asm.SYSASMPassword=oracle
oracle.install.asm.diskGroup.name=DATA
oracle.install.asm.diskGroup.redundancy=EXTERNAL
oracle.install.asm.diskGroup.AUSize=4
oracle.install.asm.diskGroup.disks=/dev/oracleasm/disks/ATA1
oracle.install.asm.diskGroup.diskDiscoveryString=/dev/oracleasm/disks/*
oracle.install.asm.monitorPassword=oracle
oracle.install.asm.configureAFD=false
oracle.install.crs.configureRHPS=false

```

5. 설치 전 사전 검증

1. 작성 완료 후 **response** 파일을 이용한 설치 전 사전 점검을 수행합니다.

```

# GRID_HOME으로 이동
cd $ORACLE_HOME

# 설치 전 response file 사전 검증
./gridSetup.sh -silent -responseFile $ORACLE_HOME/install/response/grid_install.rsp
-executePrereqs

-- 혹은 파일 새로 작성 시 아래의 파일을 사용하여 검증

./gridSetup.sh -silent -responseFile $ORACLE_HOME/install/response/grid_install.rsp
-executePrereqs

```

- 사전 검증 결과

```

[+ASM@grid:grid]$ ./gridSetup.sh -silent -responseFile $ORACLE_HOME/install/respons
e/grid_install.rsp -executePrereqs
Launching Oracle Grid Infrastructure Setup Wizard...

[WARNING] [INS-13014] Target environment does not meet some optional requirements.
  CAUSE: Some of the optional prerequisites are not met. See logs for details. /tm
p/GridSetupActions2024-06-21_02-00-41PM/gridSetupActions2024-06-21_02-00-41PM.log
  ACTION: Identify the list of failed prerequisite checks from the log: /tmp/GridS
etupActions2024-06-21_02-00-41PM/gridSetupActions2024-06-21_02-00-41PM.log. Then ei
ther from the log file or from installation manual find the appropriate configurati
on to meet the prerequisites and fix it manually.
Moved the install session logs to:
  /u01/app/oraInventory/logs/GridSetupActions2024-06-21_02-00-41PM

```



```
[+ASM@grid:~]$ cd $ORACLE_HOME
[+ASM@grid:grid]$
[+ASM@grid:grid]$ ./gridSetup.sh -silent -responseFile $ORACLE_HOME/install/response/grid_install.rsp -executePrereqs
Launching Oracle Grid Infrastructure Setup Wizard...

[WARNING] [INS-13014] Target environment does not meet some optional requirements.
CAUSE: Some of the optional prerequisites are not met. See logs for details. /tmp/GridSetupActions2024-06-21_02-00-41PM/gridSetupActions2024-06-21_02-00-41PM.log
ACTION: Identify the list of failed prerequisite checks from the log: /tmp/GridSetupActions2024-06-21_02-00-41PM/gridSetupActions2024-06-21_02-00-41PM.log. Then either from the log file or from installation manual find the appropriate configuration to meet the prerequisites and fix it manually.
Moved the install session logs to:
/u01/app/oraInventory/logs/GridSetupActions2024-06-21_02-00-41PM
```

- 로그 확인

```
INFO: [Jun 21, 2024 2:00:57 PM] ***** End of CVU Error logs *****
***
INFO: [Jun 21, 2024 2:00:57 PM] All forked task are completed at state init
INFO: [Jun 21, 2024 2:00:57 PM] -----List of failed Tasks-----
-----
INFO: [Jun 21, 2024 2:00:57 PM] *****
INFO: [Jun 21, 2024 2:00:57 PM] Package: compat-libcap1-1.10: This is a prerequisite condition to test whether the package "compat-libcap1-1.10" is available on the system.
INFO: [Jun 21, 2024 2:00:57 PM] Severity:IGNORABLE
INFO: [Jun 21, 2024 2:00:57 PM] OverallStatus:VERIFICATION_FAILED
INFO: [Jun 21, 2024 2:00:57 PM] *****
INFO: [Jun 21, 2024 2:00:57 PM] Package: compat-libstdc++-33-3.2.3 (x86_64): This is a prerequisite condition to test whether the package "compat-libstdc++-33-3.2.3 (x86_64)" is available on the system.
INFO: [Jun 21, 2024 2:00:57 PM] Severity:IGNORABLE
INFO: [Jun 21, 2024 2:00:57 PM] OverallStatus:VERIFICATION_FAILED
INFO: [Jun 21, 2024 2:00:57 PM] -----End of failed Tasks List-----
-----
```

```
INFO: [Jun 21, 2024 2:00:57 PM] -----List of failed Tasks-----
INFO: [Jun 21, 2024 2:00:57 PM] *****
INFO: [Jun 21, 2024 2:00:57 PM] Package: compat-libcap1-1.10: This is a prerequisite condition to test whether the package "compat-libcap1-1.10" is available on the system.
INFO: [Jun 21, 2024 2:00:57 PM] Severity:IGNORABLE
INFO: [Jun 21, 2024 2:00:57 PM] OverallStatus:VERIFICATION_FAILED
INFO: [Jun 21, 2024 2:00:57 PM] *****
INFO: [Jun 21, 2024 2:00:57 PM] Package: compat-libstdc++-33-3.2.3 (x86_64): This is a prerequisite condition to test whether the package "compat-libstdc++-33-3.2.3 (x86_64)" is available on the system.
INFO: [Jun 21, 2024 2:00:57 PM] Severity:IGNORABLE
INFO: [Jun 21, 2024 2:00:57 PM] OverallStatus:VERIFICATION_FAILED
INFO: [Jun 21, 2024 2:00:57 PM] -----End of failed Tasks List-----
INFO: [Jun 21, 2024 2:00:57 PM] Adding ExitStatus PREREQUISITES_NOT_MET to the exit status set
[WARNING] [Jun 21, 2024 2:00:57 PM] [WARNING] [INS-13014] Target environment does not meet some optional requirements.
CAUSE: Some of the optional prerequisites are not met. See logs for details. /tmp/GridSetupActions2024-06-21_02-00-41PM/gridSetupActions2024-06-21_02-00-41PM.log
ACTION: Identify the list of failed prerequisite checks from the log: /tmp/GridSetupActions2024-06-21_02-00-41PM/gridSetupActions2024-06-21_02-00-41PM.log. Then either from the log file or from installation manual find the appropriate configuration to meet the prerequisites and fix it manually.
INFO: [Jun 21, 2024 2:00:57 PM] Advice is CONTINUE
INFO: [Jun 21, 2024 2:00:57 PM] Finding the most appropriate exit status for the current application
INFO: [Jun 21, 2024 2:00:57 PM] The inventory does not exist, but the location of the inventory is known: /u01/app/oraInventory
INFO: [Jun 21, 2024 2:00:57 PM] Adding ExitStatus SUCCESS_WITH_WARNINGS to the exit status set
INFO: [Jun 21, 2024 2:00:57 PM] Finding the most appropriate exit status for the current application
INFO: [Jun 21, 2024 2:00:57 PM] Exit Status is -3
INFO: [Jun 21, 2024 2:00:57 PM] Shutdown Oracle Grid Infrastructure 19c Installer
"/tmp/GridSetupActions2024-06-21_02-00-41PM/gridSetupActions2024-06-21_02-00-41PM.log" 1918L, 191276C 1918,34 Bot
```

⇒ IGNORABLE 경고라 무시하고 설치해도 됨

- 경고 해결

```
dnf install -y /media/compat-libcap1-1.10-7.el7.x86_64.rpm
dnf install -y /media/compat-libstdc++-33-3.2.3-72.el7.x86_64.rpm
```

```
[root@SON ~]# cd /media
[root@SON media]# ll
합 계 9272112
-rw-r--r-- 1 root root 3059705302 6월 20 22:49 V982063-01.zip
-rw-r--r-- 1 root root 2889184573 6월 20 22:50 V982068-01.zip
-rw-r--r-- 1 root root 19112 6월 21 13:01 compat-libcap1-1.10-7.el7.x86_64.rpm
-rw-r--r-- 1 root root 195388 6월 21 13:01 compat-libstdc++-33-3.2.3-72.el7.x86_64.rpm
-rw-r--r-- 1 root root 41882 6월 20 21:43 kmod-redhat-oracleasm-2.0.8-18.0.1.el8.src.rpm
-rw-r--r-- 1 root root 99852 6월 20 21:43 oracleasm-support-2.1.12-1.el8.x86_64.rpm
-rw-r--r-- 1 root root 27092 6월 20 21:43 oracleasm-lib-2.0.17-1.el8.x86_64.rpm
-rw-r--r-- 1 root root 3411816300 6월 21 13:03 p36233126_190000_Linux-x86-64.zip
-rw-r--r-- 1 root root 133535622 6월 20 22:36 p6880880_190000_Linux-x86-64.zip
```

- 사전 점검 재실행

```
su - grid
cd $ORACLE_HOME

./gridSetup.sh -silent -responseFile $ORACLE_HOME/install/response/grid_install.rsp
-executePrereqs
```

```
[+ASM@grid:grid]$ ./gridSetup.sh -silent -responseFile $ORACLE_HOME/install/response/grid_install.rsp -executePrereqs
Launching Oracle Grid Infrastructure Setup Wizard...

Prerequisite checks executed successfully.
Moved the install session logs to:
/u01/app/oraInventory/logs/GridSetupActions2024-06-21_02-15-44PM
```

6. applyRU를 사용하여 패치 및 GI 설치 진행

1. 패치 및 설치 GI 설치 진행

```
su - grid
cd $ORACLE_HOME

./gridSetup.sh -silent -responseFile -applyRU /media/unzipped_patch/36233126 $ORACLE_HOME/install/response/grid_install.rsp -ignorePrereqFailure
```

- 패치 먼저 수행됨

```
[+ASM@grid:grid]$ ./gridSetup.sh -silent -responseFile -applyRU /media/unzipped_patch/36233126 $ORACLE_HOME/install/response/grid_install.rsp -ignorePrereqFailure
Preparing the home to patch...
Applying the patch /media/unzipped_patch/36233126...
```

- 그 다음 grid setup

```
[+ASM@grid:grid]$ ./gridSetup.sh -silent -responseFile $ORACLE_HOME/install/response/grid_install.rsp -ignorePrereqFailure
Launching Oracle Grid Infrastructure Setup Wizard...

[WARNING] [INS-30011] The SYS password entered does not conform to the Oracle recommended standards.
CAUSE: Oracle recommends that the password entered should be at least 8 characters in length, contain at least 1 uppercase character, 1 lower case character and 1 digit [0-9].
ACTION: Provide a password that conforms to the Oracle recommended standards.
[WARNING] [INS-30011] The ASMNMPP password entered does not conform to the Oracle recommended standards.
CAUSE: Oracle recommends that the password entered should be at least 8 characters in length, contain at least 1 uppercase character, 1 lower case character and 1 digit [0-9].
ACTION: Provide a password that conforms to the Oracle recommended standards.
[WARNING] [INS-41808] Possible invalid choice for OSASM Group.
CAUSE: The name of the group you selected for the OSASM group is commonly used to grant other system privileges (For example: asmdba, asmoper, dba, oper).
ACTION: Oracle recommends that you designate asmadmin as the OSASM group.
[WARNING] [INS-41809] Possible invalid choice for OSDBA Group.
CAUSE: The group name you selected as the OSDBA for ASM group is commonly used for Oracle Database administrator privileges.
ACTION: Oracle recommends that you designate asmdba as the OSDBA for ASM group, and that the group should not be the same group as an Oracle Database OSDBA group.
[WARNING] [INS-41810] Possible invalid choice for OSOPER Group.
CAUSE: The group name you selected as the OSOPER for ASM group is commonly used for Oracle Database administrator privileges.
ACTION: Oracle recommends that you designate asmoper as the OSOPER for ASM group, and that the group should not be the same group as an Oracle Database OSOPER group.
[WARNING] [INS-41813] OSDBA for ASM, OSOPER for ASM, and OSASM are the same OS group.
CAUSE: The group you selected for granting the OSDBA for ASM group for database access, and the OSOPER for ASM group for startup and shutdown of Oracle ASM, is the same group as the OSASM group, whose members have SYSASM privileges on Oracle ASM.
ACTION: Choose different groups as the OSASM, OSDBA for ASM, and OSOPER for ASM groups.
[WARNING] [INS-41875] Oracle ASM Administrator (OSASM) group specified is same as the users primary group.
CAUSE: Operating system group dba specified for OSASM Group is same as the users primary group.
ACTION: It is not recommended to have OSASM group same as primary group of user as it becomes the inventory group. Select any of the group other than the primary group to avoid misconfiguration.
[WARNING] [INS-13014] Target environment does not meet some optional requirements.
CAUSE: Some of the optional prerequisites are not met. See logs for details. gridSetupActions2024-06-21_03-20-25PM.log
ACTION: Identify the list of failed prerequisite checks from the log: gridSetupActions2024-06-21_03-20-25PM.log. Then either from the log file or from installation manual find the appropriate configuration to meet the prerequisites and fix it manually.
The response file for this session can be found at:
/u01/app/grid/product/grid/install/response/grid_2024-06-21_03-20-25PM.rsp

You can find the log of this install session at:
/tmp/GridSetupActions2024-06-21_03-20-25PM/gridSetupActions2024-06-21_03-20-25PM.log
```

2. 스크립트 수행

- root 사용자로 아래의 스크립트 2개 수행

```
You can find the log of this install session at:
/tmp/GridSetupActions2024-06-21_03-20-25PM/gridSetupActions2024-06-21_03-20-25PM.log

As a root user, execute the following script(s):
1. /u01/app/oraInventory/orainstRoot.sh
2. /u01/app/grid/product/grid/root.sh

Execute /u01/app/grid/product/grid/root.sh on the following nodes:
[SON]

Successfully Setup Software with warning(s).
As install user, execute the following command to complete the configuration.
/u01/app/grid/product/grid/gridSetup.sh -executeConfigTools -responseFile /u01/app/grid/product/grid/install/response/grid_install.rsp [-silent]

Moved the install session logs to:
/u01/app/oraInventory/logs/GridSetupActions2024-06-21_03-20-25PM
```

As a root user, execute the following script(s):

1. /u01/app/oraInventory/orainstRoot.sh
2. /u01/app/grid/product/grid/root.sh

Execute /u01/app/grid/product/grid/root.sh on the following nodes:

[SON]

Successfully Setup Software with warning(s).

As install user, execute the following command to complete the configuration.

```
/u01/app/grid/product/grid/gridSetup.sh -executeConfigTools -responseFile /
u01/app/grid/product/grid/install/response/grid_install.rsp [-silent]
```

- 수행 결과

```
[root@SON ~]# /u01/app/oraInventory/orainstRoot.sh
Changing permissions of /u01/app/oraInventory.
Adding read,write permissions for group.
Removing read,write,execute permissions for world.
```

```

Changing groupname of /u01/app/oraInventory to dba.
The execution of the script is complete.
[root@SON ~]#
[root@SON ~]# /u01/app/grid/product/grid/root.sh
Check /u01/app/grid/product/grid/install/root_SON_2024-06-21_15-29-26-857826098.log
for the output of root script
[root@SON ~]#

```

```

[root@SON ~]# /u01/app/oraInventory/orainstRoot.sh
Changing permissions of /u01/app/oraInventory.
Adding read,write permissions for group.
Removing read,write,execute permissions for world.

Changing groupname of /u01/app/oraInventory to dba.
The execution of the script is complete.
[root@SON ~]#
[root@SON ~]# /u01/app/grid/product/grid/root.sh
Check /u01/app/grid/product/grid/install/root_SON_2024-06-21_15-29-26-857826098.log for the output of root script
[root@SON ~]#

```

- grid 유저에서 아래의 코드 수행

```
su - grid
```

```
/u01/app/grid/product/grid/gridSetup.sh -executeConfigTools -responseFile /u01/app/
grid/product/grid/install/response/grid_install.rsp -silent
```

```

[root@SON ~]# su - grid
[+ASM@grid:~]$ /u01/app/grid/product/grid/gridSetup.sh -executeConfigTools -respons
eFile /u01/app/grid/product/grid/install/response/grid_install.rsp -silent
Launching Oracle Grid Infrastructure Setup Wizard...

```

You can find the logs of this session at:
/u01/app/oraInventory/logs/GridSetupActions2024-06-21_03-31-50PM

You can find the log of this install session at:
/u01/app/oraInventory/logs/UpdateNodeList2024-06-21_03-31-50PM.log
Successfully Configured Software.

```

[root@SON ~]# su - grid
[+ASM@grid:~]$ /u01/app/grid/product/grid/gridSetup.sh -executeConfigTools -responseFile /u01/app/grid/product/grid/install/response/grid_install.rsp -silent
Launching Oracle Grid Infrastructure Setup Wizard...

You can find the logs of this session at:
/u01/app/oraInventory/logs/GridSetupActions2024-06-21_03-31-50PM

You can find the log of this install session at:
/u01/app/oraInventory/logs/UpdateNodeList2024-06-21_03-31-50PM.log
Successfully Configured Software.

```

7. 설치 완료 후 확인 작업 진행

```
[+ASM:grid]$ crsctl status res -t
```

```

-----
Name          Target  State      Server                     State details
-----
Local Resources

```

```

-----
ora.DATA.dg
      ONLINE  ONLINE      son              STABLE
ora.LISTENER.lsnr
      ONLINE  ONLINE      son              STABLE
ora.asm
      ONLINE  ONLINE      son              Started,STABLE
ora.ons
      OFFLINE OFFLINE      son              STABLE
-----
Cluster Resources
-----
ora.cssd
   1      ONLINE  ONLINE      son              STABLE
ora.diskmon
   1      OFFLINE OFFLINE              STABLE
ora.evmd
   1      ONLINE  ONLINE      son              STABLE
-----

```

```

[+ASM@grid:~]$ crsctl stat res -t
-----
Name                Target  State        Server          State details
-----
Local Resources
-----
ora.DATA.dg
      ONLINE  ONLINE      son              STABLE
ora.LISTENER.lsnr
      ONLINE  ONLINE      son              STABLE
ora.asm
      ONLINE  ONLINE      son              Started,STABLE
ora.ons
      OFFLINE OFFLINE      son              STABLE
-----
Cluster Resources
-----
ora.cssd
   1      ONLINE  ONLINE      son              STABLE
ora.diskmon
   1      OFFLINE OFFLINE              STABLE
ora.evmd
   1      ONLINE  ONLINE      son              STABLE
-----

```

asmcmd로 접속해보기

```

[+ASM:grid]$ asmcmd
ASMCMDB>
ASMCMDB>

```

```
[+ASM@grid:~]$ asmcmd
ASMCMD>
ASMCMD>
ASMCMD>
```

8. Patch 확인(grid 유저로)

```
opatch lspatches

36460248;TOMCAT RELEASE UPDATE 19.0.0.0.0 (36460248)
36383196;DBWLM RELEASE UPDATE 19.0.0.0.0 (36383196)
36240578;OCW RELEASE UPDATE 19.23.0.0.0 (36240578)
36233343;ACFS RELEASE UPDATE 19.23.0.0.0 (36233343)
36233263;Database Release Update : 19.23.0.0.240416 (36233263)

OPatch succeeded.
```

```
[+ASM@grid:~]$ opatch lspatches
36460248;TOMCAT RELEASE UPDATE 19.0.0.0.0 (36460248)
36383196;DBWLM RELEASE UPDATE 19.0.0.0.0 (36383196)
36240578;OCW RELEASE UPDATE 19.23.0.0.0 (36240578)
36233343;ACFS RELEASE UPDATE 19.23.0.0.0 (36233343)
36233263;Database Release Update : 19.23.0.0.240416 (36233263)

OPatch succeeded.
```

Read me(패치 매뉴얼) 과 비교해서 성공적으로 패치되었는지 확인

Table 1-2 lists the various patches by patch number that are installed as part of this bundle patch.

Table 1-2 Patch Numbers Installed as Part of this Bundle Patch

Patch Number	Description	Applicable Homes
35320081	Database Release Update 19.20.0.0.230718	Only Oracle home for non-Oracle RAC setup. Both Oracle home and Grid home for Oracle RAC setup.
35320149	OCW Release Update 19.20.0.0.230718	Both Oracle home and Grid home.
35332537	ACFS Release Update 19.20.0.0.230718 Footnote 2	Only Grid home.
35553096	Tomcat Release Update 19.0.0.0.0 Footnote 2	Only Grid home.
33575402	DBWLM Release Update 19.0.0.0.0 Footnote 2	Only Grid home.